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ABSTRACT

Presented in this paper is a description of the Computer Assisted Renewal Education (CARE) program, which uses computer-assisted instruction to reach teachers for inservice education. The CARE program utilizes a mobile van to transport the computer and equipment from one location to another. The system includes a television tube, a set of earphones for audio tape, an image projector, a keyboard typewriter, and a light-sensitive pen for each student station. A handbook, text, testing materials, and other teaching aids accompany most of the courses. Attitudes of teachers toward CARE have been positive, and academic levels are high, as shown by data from 13 rural areas in Pennsylvania. At present, reading instruction for teachers is part of a larger course in diagnostic teaching of preschool and primary children. The diagnostic teaching model focuses on a child's individual needs in reading readiness, word attack skills, comprehension, and study skills. Future courses will deal with reading instruction more thoroughly. (Author/WR)

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We CARE About In-Service Education

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At Penn State, we CARE about in-service education. We care, first, because we see a real need for in-service education in the state of Pennsylvania, and, second, we see in-service teachers as a major constituency of Penn State's College of Education. In-service teacher education is not a new idea. What is new is the concern for quality and specific training based on the teacher's needs and the needs of the school district. Penn State has long been associated with in-service education. Many of our instructors do workshops with school districts; our main campus and the twenty commonwealth campuses throughout Pennsylvania hold classes after school and in the summer primarily designed for teachers in-service. Why then do we find such a continuing problem in serving in-service teachers?

The Rural Nature of our Constituency

One major concern in Central Pennsylvania is that a large percentage of our students and teachers are in rural areas. Our campuses tend not to be in those rural areas. Roughly two-thirds of Pennsylvania geographically falls under the designation of a rural, economically depressed area; in general, the Appalachian Region. The Pennsylvania School Study Council (PSSC), based at Penn State, represents 255 school districts which have joined to share information and upgrade the educational resources of their own districts. Most of the PSSC members are from Central Pennsylvania; however, the membership stretches from Erie to Scranton in the north, and from Warren to York,

north to south through the central region of the state. This rural area is an important constituency of Penn State.

One of the factors which indicates the weakness of the economic base in these rural school districts is the state aid formula in Pennsylvania: the poorer the district, the greater the state's contribution to each school district budget. The state averages about 50% support but in the PSSC districts, the average is 60% or above. Twenty-nine districts in a recent study indicated they are receiving 75% or more of their local school budget from state support.(1) In Wyalusing, a school district with which I have worked, 75% of the school district budget comes from state funds and 15% from federal funds. This means that only 10% of the school budget is given by local tax sources.

An important factor in determining the rural nature of this constituency is the sparsity factor--the ratio between the geographical area of the school district and its population. Consolidation of small rural school districts into larger ones has resulted in larger pupil populations, but the district's area may be enormous. In Wyalusing, to use the same example, the pupil population is 2002 of a total population of 7112. But the district covers approximately 300 square miles. Thus, the sparsity factor is roughly 7 students (and 24 people) per square mile. This factor is complicated by the generally mountainous terrain and lack of modern highways, so that travel is long and difficult. There is no real question that Penn State's constituency for in-service education includes a large number of rural districts, most of which are relatively depressed economically, relatively inaccessible by major transportation and relatively isolated from other contacts with the outside world.

Several other concerns about in-service education have become more obvious in recent years. One is the problem of quality instruction. We find it most difficult to locate and keep quality part-time instructors in these rural areas. It is difficult to monitor teacher performance when the teacher's performance is occurring 200 miles away from the main campus. We find also that the lack of resources, materials and equipment makes quality instruction much more difficult than on a regular college campus. Regular university faculty members have gone out to teach continuing education classes from time to time, but it remains difficult to convince many of them to do this, because of distance and the difficulty of travel.

The most recent occurrence which changed our concerns about in-service education into crises was a ruling by the Pennsylvania Department of Education (PDE) in Harrisburg regarding the permanent certification of teachers in Pennsylvania. Twenty-four credit hours beyond the Bachelor's Degree and 3 years of teaching are required for permanent certification. In the past, that twenty-four credit hours was generally taken on a college or university campus or in University-sponsored Continuing Education. The courses were designed for resident instruction and suited the off-campus locations in varying degrees. The most recent ruling of the PDE ordained that a university's credit was no longer needed for permanent certification. A school district may now set up in-service education leading to permanent certification for its teachers, designed to meet their very own needs, and without involving a university for instruction or cre[illegible] This, of course, affects our constituency at the university. We must find a way to allow high-quality university offerings to become available to teachers in rural areas at a time and place convenient for them in order to retain our position as the

supplier of quality in-service teacher education in Pennsylvania. The PDE ruling has added urgency to a problem which has been developing for many years.

CARE: Computer Assisted Renewal Education

The CARE program is one of the most immediate and far reaching results of the university's combined concern to offer inservice education of great quality and to meet teachers at their own time and place. CARE is an acronym for Computer Assisted Renewal Education, a federally-funded program which has been in development and operation since 1969.* CARE uses computer-assisted instruction (CAI) as the means of providing quality education at the right time and place for the in-service teacher. CAI may already be familiar to you. A computer is programmed to provide instruction and to respond immediately to student input. The psychological principles underlying this kind of instruction include immediate feedback on student responses, great student involvement in learning, and emphasis on self-pacing and flexibility in learning. In the CARE program, flexibility includes scheduling what time to attend class and be on the computer, and self-pacing through the program.

Individualizing procedures are a large part of the CAI program. The CARE program is competency-based so that at intervals in a course, a student takes a pre-test. If he is already familiar with the material, he is not required to take that section of the course. On the other hand, if he has great trouble understanding the material available, he has additional opportunity to practice and work with the material before attempting the post-test at the end of each section of the course.

*CARE is supported by the Pennsylvania State University and the Bureau of Education for the Handicapped, U. S. Office of Education.

The student who does not reach criterion level or demonstrate his competency on a given section will be branched back into other materials to broaden his understanding of the material and allowed to try a post-test a second time.

As in many CAI operations, the CARE station includes a Cathode Ray Tube (CRT) which looks like a television tube. A student receives information from material written on the CRT by the computer. He may respond in several ways. There is a light-sensitive pen attached to the CRT with which he may point to certain answers on the CRT. In addition, he may use the typewriter keyboard in front of him to respond in certain prescribed ways. Additional elements of this system include a rear-screen image projector, on which color images may be drawn at random from materials stored in the system, and an audio set, earphones from which a student receives information stored on a regular audio-tape cartridge. The student, then, can receive information from the CRT, from the image projector, or from an audio tape. He can respond with his light-sensitive pen or by typing on the keyboard. Most of the CARE courses also include a handbook, testing materials for use with students, and other kinds of materials which come in sets for each student.

Initially, CARE was developed at the Penn State campus. It has since been field tested throughout rural Pennsylvania and now is being used nationwide. As elements are approved for course credit, further elements of the program are being field tested. What makes the CARE system unique in in-service education is that these student CAI stations are available on a mobile van which looks very much like a semi-trailer. This mobile van can be moved from site to site throughout a school district or throughout the country. It comes

equipped with a complete IBM 1500 instructional system with 16 stations, each with complete hardware and all necessary materials. The van can operate 12 hours a day, 6 days a week allowing students maximum flexibility in scheduling their instructional time. The van's computer can accommodate 10 courses simultaneously, so that a school district can have several different in-service courses running at the same time. The success of the first mobile laboratory has prompted a second van, which went into operation Fall, 1973.

We think the CARE system allows us to control the quality of instruction because all instruction has been planned by carefully selected and specially trained professionals in all subject areas. Elaborate formative evaluation as the field testing procedures go on has allowed the staff to verify that the program will work efficiently for each student wherever the mobile lab is parked. During the initial phase of the CARE program, CARE I, The Early Identification of Handicapped Children, was taught simultaneously by CAI and by traditional lecture-discussion techniques on campus. The results confirmed that CAI is an efficient and effective teaching technique. Students taking the course by CAI averaged 24% higher scores on the final exam than students in the traditional class, and the CAI students completed the course in 33% less time.[(2)] We have sufficient data from the three years of operation so that we can estimate how many teachers can be trained in a given period and how much it will cost the sponsoring agencies. For example, we can provide a 3-credit course for 275 teachers in a 7-week period at a given site for a little over $100 a teacher. In all cases to date we have been able to arrange simultaneous registration at a university either locally or at Pennsylvania State University to give 3 graduate credits for a course

under the CARE program. This means that the local district is assured of a quality educational program for its in-service teachers and the teacher is earning credit either toward permanent certification or, if he wishes, toward a master's degree.(5)

The CARE program has really only begun. Its future is limited only by the cost of course development. CARE I, the initial course, involves the early identification of handicapped children. CARE II/III is a program of diagnostic and prescriptive teaching of pre-school and primary children. In this program, the two courses run relatively simultaneously, CARE II aimed at the pre-school teacher (N-K) and CARE III at the primary teacher (1-3). Many elements of the courses are identical, but in certain areas such as reading, where there is quite a difference, separate modules are developed and the teacher chooses which is more appropriate for his own needs. CARE IV is the education of visually handicapped children. Additional courses, currently being planned, include the education of hearing handicapped children and work with severely retarded children.

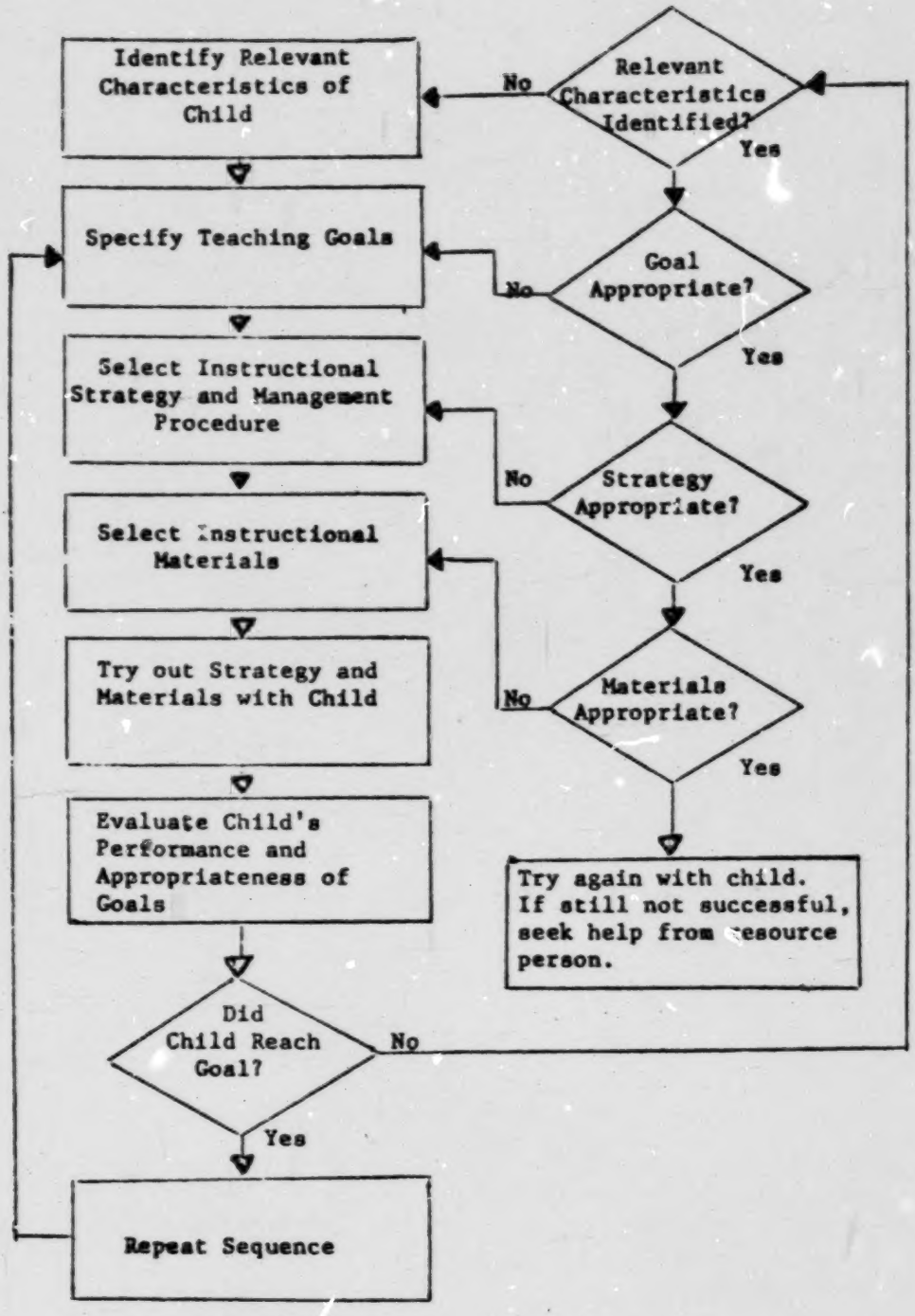
Reading and CARE

Reading is only one part of CARE II/III. The development of the whole child provides the larger context. As the staff and I worked to fit reading into this larger context, several principles became clear. One is the importance of the oral language development of the student, which is emphasized in both the preschool and primary sections of the course. A chapter in each course is devoted to helping a teacher develop an understanding of developmental psycholinguistics: Testing to see where a child's oral language development should be at age 2,3,4,5, and whether a given child has normal oral language. Especially in our rural area, with a number of economically deprived

children, we find that linguistically different children abound. Many speak non-standard dialects, like the Black dialect or Spanish/English as in Southeastern Pennsylvania. In addition, we have traces of various languages all across Central Pennsylvania in pockets of particular national origin: Polish, Czech, Italian, Russian. We feel very strongly that a teacher should appreciate the differences between these dialects and have some idea of treating them systematically in the classroom.

A further emphasis is on individual diagnosis and prescription. The diagnostic teaching model is useful with any problem or any child.(3) The teacher specifies the diagnostic principles involved in determining what a child should learn and whether he has learned it. When this model is applied to reading, it becomes important to allow the teacher great flexibility in the central steps of selecting the instructional strategy and the instructional materials. The important areas of diagnosis are understanding what characteristics are important in reading and being able to translate those characteristics into teaching goals. We stress the importance of readiness, not only in reading but in other areas of the curriculum. Rather than recommending a certain way of teaching reading or listing specific published materials, we chose to give broad lists of potential materials in the handbook.

One procedure which is used as an example in the CARE program is the Fountain Valley Teacher Support System in Reading.(4) The Fountain Valley system suggests a diagnostic procedure in which a teacher gives a series of reading skills pretests to a student and uses the results to match the student's needs to particular elements within a published reading series. In the case study for our chapter, we ask the students



Decision Model for Diagnostic Teaching

to select the important characteristics of a given child and carry him through a series of pretests to specify where his reading instruction should begin. Since the Fountain Valley system is skills oriented and there are many other elements in any complete reading program, the diagnostic teaching procedure goes on to look at other elements of the child's reading besides his phonics, structural analysis and other skills. Interest in reading, social and emotional problems are discussed and strategies described for dealing with them.

Clearly CARE II/III is not a reading course. It is much broader than that. We hope in the near future to develop a CAI course devoted primarily to the teaching of reading. What we do have in CARE II/III is a course designed to integrate the problems of teachers working with real students in real classrooms with necessary theoretical concerns to give them a clear basis for making diagnostic and prescriptive decisions. It allows the university and the certifying agencies to feel confident that the quality of the in-service education is high. It allows the school district to feel confident that the teacher is developing competencies he needs to meet the students in his own school. It allows a teacher to meet his in-service requirements in his own town or very close to it.

Teacher attitudes toward CARE have been carefully monitored to help our formative evaluation process. Formal attitude surveys have been systematically conducted. Extensive work with the students who took this course at its first sites in rural Central Pennsylvania shows that their attitude toward the course and the procedure was positive.(5) Unsolicited comments have given us additional reactions. One teacher in Smethport said, "For an in-service teacher, this has been the best method I have found". A teacher in Clearfield said, "I learned much

more in a shorter amount of time than I have experienced in very many other courses." A teacher in Ridgway reported, "I felt very involved with the course. Sometimes in a classroom, your mind wanders; here, it couldn't." We are convinced that the mobile CAI laboratory and the CARE program of in-service courses are effective means of reaching rural teachers for quality in-service education.

FOOTNOTES

1. Caldwell, William E. Annual Analysis of Staff, Salary, and Fringe Benefits. University Park, Pa.: Pennsylvania School Study Council, Inc., 1973, 25 pp.

2. Cartwright, C. A., Cartwright, G. P., and Robine, G. G. CAI course in the early identification of handicapped children. Exceptional Children, February 1972, pp. 453-459.

3. Cartwright, G. P., Cartwright, C. A. and Yoseldyke, J. R. Two decision models: Identification and diagnostic teaching of handicapped children in the regular classroom. Psychology in the Schools, January 1973, Vol. X, No. 1, pp. 4-11.

4. Fountain Valley Teacher Support System in Reading, Richard L. Zweig Associates, Inc., 1972.

5. Sedlak, Robert A., Karl G. Borman and G. Phillip Cartwright. "Using Student Attitudes as an Index for Gauging Improvements Following a Formative Evaluation." College Student Journal, 6:4, pp. 3-9.